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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Dieter Renner

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FOLEY AND LARDNER LLP

SUITE 500

3000 K STREET NW

WASHINGTON, DC 20007

EXAMINER

CAILLOUET, CHRISTOPHER C

ART UNIT

PAPER NUMBER

1791

MAIL DATE

DELIVERY MODE

02/06/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/540,949

Applicant(s)

RENNER ET AL.

Examiner

CHRISTOPHER C. CAILLOUET

Art Unit

1791

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-24 and 27-38 is/are rejected.
- 7) ☒ Claim(s) 25 and 26 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 06/24/05
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Examiner: Caillouet

January 30, 2009

METHOD FOR TREATING FABRICS AND THEIR USE IN VEHICLE EQUIPMENT

DETAILED ACTION

Claim Rejections- §112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 21 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 21 recites the limitation "wherein the spacing of holes in the texture surface structure" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections- §102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 17-18, 20, 23-24, 27, and 30-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Bauer et al. (US 20010010423).

As to claims 17 and 18, Bauer et al. (Bauer) discloses a process for preweakening the inside of an automotive trim piece (vehicle interior component) cover using a laser (Abstract). Bauer discloses that a laser partially removes material from a

textile component to form a plurality of holes, thus defining a weakening zone in the material (Fig. 13; paragraphs 50 and 94).

As to claim 20, Bauer further discloses that the textile may be a fabric (Paragraph 50).

As to claim 23, Bauer further discloses that the perforations are disposed in a linear arrangement (Figure 7).

As to claim 24, Bauer discloses that the holes are introduced at an angle, 90°, with respect to the surface of the textile surface structure (Figure 13).

As to claim 27, Bauer discloses a process for preweakening a section of a vehicle interior component.

As to claims 30 and 31, Bauer discloses a method of producing a vehicle component wherein a laser introduces holes into the foam layer (Fig. 9 and 10; paragraph 90) and the fabric layer (Fig. 13; paragraphs 50 and 94). Since the component is laser treated from the back side, it is inherent that the holes in the foam layer are formed before the holes in the fabric layer of the component.

As to claim 32, the method of claim 30 is taught as seen above. Bauer further discloses bonding a supporting element (108, 116) to the foam and textile layers (Fig. 10, 16; paragraphs 90-91 and 99-102).

Claim Rejections- §103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 19 and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bauer et al. (US 20010010423) as applied to claim 17 above, and further in view of Hagenow et al. (US 5632914).

Bauer fails to disclose that the holes made by the laser run entirely through the decorative layer (fabric) wherein the entry opening is smaller than the exit opening. Hagenow et al. (Hagenow) discloses a method of making a decorative layer with a predetermined weakening line for an airbag deployment device (Abstract). Hagenow teaches that his method allows for a tear seam to be made wherein the microholes formed through the decorative layer are not visible to the human eye (column 3, lines 11-18). Hagenow further discloses that the holes are made in the decorative layer by a laser, such that the holes at the entry opening are larger than that of the exit opening (Column 6, lines 7-18).

Insofar as Bauer and Hagenow are analogous arts from the same field of endeavor of airbag component production, it would have been obvious to one of ordinary skill in the art at the time of the invention to have combined the hole forming method as taught by Bauer to include the hole forming method of Hagenow wherein the laser cuts entirely through the decorative layer. This would have been an obvious improvement to one of ordinary skill in the art at the time of the invention because one of ordinary skill would recognize the advantage of weakening the decorative layer

further, as is inherent when perforations are made entirely through a substrate, without said perforations being visible to the human eye.

As to claims 21-22, Bauer and Hagenow fail to disclose that the spacing of the holes is 0.6 to 0.75 times the spacing between the threads of the textile surface. Hagenow does disclose that the spacing of the holes correlates to the reduced tensile strength of the substrate (column 6, lines 23-30). Therefore, it would have been within the skill of the ordinary artisan to adjust the amount of the proprietary additive to the feedstock along with thermal spray temperature of the process to yield thicker or thinner films. *Discovery of optimum value of result effective variable in known process is ordinarily within skill of art.* In re Boesch, CCPA 1980, 617 F.2d 272, 205 USPQ215.

7. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wu et al. (US 6254122) in view of Bauer et al. (US 20010010423).

Wu et al. (Wu) discloses a reinforced trim cover for a vehicle seat assembly wherein a tear line is formed for deployment of an airbag (Abstract; Fig. 2 & 4). Wu discloses that tear lines are made in the trim cover but fails to disclose whether laser ablation may be used to make the tear lines. Bauer et al. (Bauer) discloses a process for preweakening the inside of an automotive trim piece (vehicle interior component) cover using a laser (Abstract). Bauer discloses that a laser partially removes material from a textile component to form a plurality of holes, thus defining a weakening zone in the material (Fig. 13; paragraphs 50 and 94). Bauer teaches that laser scoring the tear line into the component results in elimination of any exteriorly visible lines, even where minimum material remains above the scoring groove (paragraph 63). Insofar as Wu

and Bauer are analogous arts from the same field of endeavor of airbag components and their production, it would have been obvious to one of ordinary skill in the art at the time of the invention to have utilize the tear line formation technique of Bauer to produce the seat assembly trim cover of Wu because one of ordinary skill would have recognized the advantage of a trim component with hidden airbag tear lines.

8. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kim (US 20020047252) in view of Bauer et al. (US 20010010423).

Kim discloses jacket with deployable airbags for safety in an auto collision (Abstract; Figure 7). Kim discloses that upon detection of a collision, the jacket will deploy airbags from within the jacket (paragraph 14; Fig. 6). Kim further discloses that the jacket may be made of leather, vinyl, or other fabrics such that the jacket is functional and comfortable (paragraph 36). Kim fails to disclose whether laser ablation may be used to make the tear lines for the airbag deployment from the jacket. Bauer et al. (Bauer) discloses a process for preweakening the inside of an automotive trim piece (vehicle interior component) cover using a laser (Abstract). Bauer discloses that a laser partially removes material from a textile component to form a plurality of holes, thus defining a weakening zone in the material (Fig. 13; paragraphs 50 and 94). Bauer teaches that laser scoring the tear line into the component results in elimination of any exteriorly visible lines, even where minimum material remains above the scoring groove (paragraph 63). Insofar as Kim and Bauer are analogous arts from the same field of endeavor of airbag components and their production, it would have been obvious to one of ordinary skill in the art at the time of the invention to have utilize the tear line

formation technique of Bauer to produce the seat assembly trim cover of Kim because one of ordinary skill would have recognized the advantage of a jacket component with hidden airbag tear lines.

9. Claims 33-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bauer et al. (US 20010010423).

As to claims 33-38, the method of claim 32 is taught as seen above. Bauer fails to disclose weakening the substrate/supporting element (116) before attaching it to the foam layer (120) (Fig. 16; paragraphs 99-102). Bauer does disclose that the cover piece (textile material) may be preweakened before attaching it to the substrate or after attaching it to the substrate. Bauer discloses a method wherein the multiple layers of material are bonded together, and then the weakening zones are made into the composite in a single step by a laser. It is the position of the examiner that using multiple steps for forming holes in substrates wherein said holes will align in the finished product would have been obvious to one of ordinary skill in the art at the time of the invention because one of ordinary skill would recognize that the method as taught by Bauer is a simple variant wherein one laser ablation step is used to cut holes through the material that align with each other.

Allowable Subject Matter

10. Claims 25-26 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. The following is a statement of reasons for the indication of allowable subject matter: No prior art shows or suggests producing a fabric layer for an airbag component by laser drilling perforations into a textile material at an angle of 20°-45° angle relative to the surface of the textile material. The closest prior art of Bauer et al. discloses drilling perforations into the fabric material, but does so at a perpendicular angle relative to the surface of the material. Although Bauer et al. shows an apparatus such as the laser cutter in Figure 4A that is capable of making cuts into the interior components at the recited angles in the limitation, there is no teaching or suggestion to make the perforations at any angle other than perpendicular to the surface of the component material.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Gray et al. (US 20020153710) discloses an airbag door and method of making the same. Okumura et al. (US 6433304) discloses a method forming weakening lines in an airbag component. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTOPHER C. CAILLOUET whose telephone number is (571)270-3968. The examiner can normally be reached on Monday - Thursday; 9:30am-4:00pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Phillip Tucker can be reached on (571) 272-1095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Christopher C Caillouet/
Examiner, Art Unit 1791

/Mark A Osele/
Primary Examiner, Art Unit 1791
February 2, 2009